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A Family Chicken Flock for Appalachia

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A FAMILY CHICKEN FLOCK FOR APPALACHIA

Prepared by

Animal Husbandry Research Division, Agricultural Research Service

Keeping a small flock of second-year layers is a good way to provide all the eggs—and some of the meat—your family needs. With proper feed and care, 30 layers should furnish your family an average of a dozen eggs a day the year round.

For a laying flock, you need feed, a small poultry house, winter light, and good stock.

Feed is the main cost of a poultry flock. A concentrated protein feed supplement mixed with corn is suitable. When properly mixed, this is the least expensive feed that can assure your layers a good ration.

If you have to buy all commercial feed, it probably will not pay to keep a small flock of layers.

It no longer pays to produce eggs and poultry from a small laying flock for sale.

But you can come out ahead with poultry if you keep a small flock of second-year layers for family use and feed your own or local grain.

GETTING STARTED

Second-Year Layers

One of the best ways to start a small laying flock is to buy second-year layers—usually White Leghorns—from a commercial flock-owner. These yearling hens are normally removed from commercial flocks after 12 to 15 months of lay and replaced with pullets.

Most commercial poultrymen do not like to sell just a few layers. However, they will sell a larger number of second-year layers at 25 to 40 cents each.

Your county agent can help arrange for you and interested neighbors to buy second-year layers from a commercial flock.

If possible, get hens that have been kept on the floor during their first laying year. When commer-

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Another way to start a small flock is to brood and raise day-old chicks. Rhode Island Reds, New Hampshires, and Plymouth Rocks—and crosses of these breeds—are good for meat as well as egg production. They lay brown eggs. Day-old chicks of these breeds cost 12 to 16 cents each.

It also is possible to produce chickens for home use by setting fertile eggs under a broody hen. In this kind of flock, however, losses may be much higher than in flocks of the same size started with second-year layers, day-old chicks, or started pullets.

For further information, see your county agricultural agent.

Estimated Costs and Returns for a Laying Flock (12 Months)

For a 30-layer flock, you buy—	
Each second-year layer for	**$0.35**
24 pounds of protein feed supplement, per layer	**1.50**
72 pounds of ground corn, per layer	**1.69**
Electricity (winter light), per layer	**.06**
So the cost for 1 layer for 12 months is	**3.60**
From each layer you should get—	
124 eggs, worth 45 cents a dozen	**4.65**
1 stewing hen, worth	**.80**
Which adds up to	**5.45**
To figure your return—	
Take what you get from 1 layer	**5.45**
Subtract cost for 1 layer	**3.60**
Which gives you	**1.85**
Subtract 12 percent of this to cover losses	**.22**
	1.63

So each layer brings you eggs and meat worth about $1.60 more than you spent.

NOTE: Feed costs are figured at $6.25 per 100 pounds of concentrated protein supplement and $2.35 per 100 pounds of ground corn. If you feed homegrown corn, your cash costs will be lower. Cost of electricity will be higher for each hen if your flock has less than 30 layers. Values of eggs and stewing hen are based on estimated prices in food stores. Losses are based on mortality of 1 percent of the flock per month, or 12 percent if you keep second-year layers 12 months.

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cial flocks are raised on wire or in cages, they may not develop immunity to certain diseases and parasites. There is some indication that such chickens will not do as well if moved to the floor.

Second-year layers from a commercial flock offer these advantages:

- They have been bred for high production and should lay more than enough eggs to "pay their own way" during the time you keep them.
- They are from tested, healthy stock and have already been vaccinated against common diseases.
- They provide meat (stewing hens) when they stop laying.

Second-year layers go through an 8- to 12-week molt before they begin to lay at a high rate.

To keep egg production high, plan to replace your entire flock when new second-year layers are available from a commercial flock. Usually, this will be 12 to 15 months after you get your original flock.

Size of Flock

To figure out how many second-year layers to buy—

- Decide how many eggs you and your family need every day.
- Multiply this number by 2½.

Example: If family members can use 12 eggs a day, you probably want to start with 30 layers.

FEED

Hens eat 7 to 9 pounds of feed a month, whether or not they are laying. One hen eats about ¼ pound (⅔ cup) of feed each day. To feed 30 hens for 1 day, it takes about 7½ pounds (5 quarts) of feed.

Plan to feed second-year layers for about 15 months—through 3 months of molt and 12 months of egg production.

The following ration is good for second-year layers:

Concentrated protein feed supplement for layers (containing 36 to 40 percent of protein), mixed with ground corn.

If you use whole corn, feed 1 part of supplement to 3 parts of corn.

Supplement for one layer costs about 12½ cents a month. Ground corn for one layer costs about 14 cents a month. Therefore, it costs about 27 cents a month per layer for this ration if you buy all the feed—or less, if you have home-grown corn.

Corn—by itself—is not a complete feed for layers. It doesn't have enough of the protein that hens need for egg production. It also lacks some vitamins that hens need for good health. When combined with a protein supplement, however, corn makes a good feed.

If you want, you can feed fresh kitchen scraps, garden products, and surplus milk to layers. Put out only as much of these feeds as the hens will eat in 5 or 10 minutes. Put milk in a plastic or enamel pan. Do not use a galvanized container.

Be careful in your choice of scraps. Beware of spoiled meat.

A ration using laying mash—the most common type of poultry feed for commercial flocks—costs more than a ration using concentrated protein supplement. When a ration containing half mash and half corn costs $3.75 per 100 pounds, the same amount of a ration containing supplement and ground corn costs $3.32.

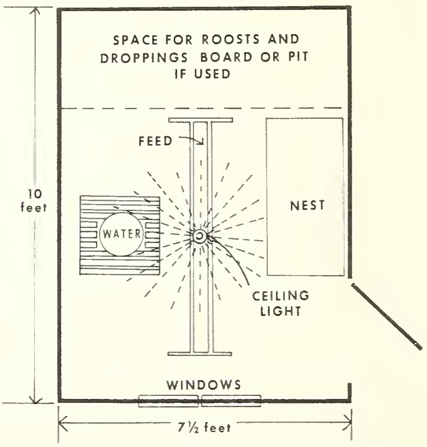
Vegetable peelings and green tops of vegetables are good for chickens. Fruit peelings, onions, and strong-flavored foods may give a bad taste to eggs and meat. Cook potato peelings that are fed to chickens.

Oystershell and Grit

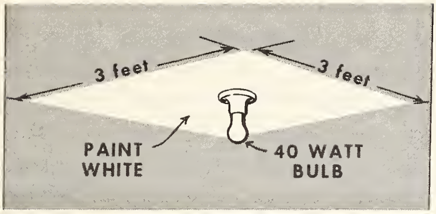
Give layers oystershell to supply the calcium they need for strong eggshells. Provide grit for layers if they get whole corn.

Water

Chickens need plenty of water to remain healthy. Be sure that clean water is available at all times.



Good arrangement for a small poultry house



Ceiling light

Normally, 30 layers drink 2 to 3 gallons of water a day. Layers need extra water when temperatures are above 80° F.

HOUSING

You can remodel a small building—or part of a large building—for your laying flock. The poultry house should be dry and well ventilated, but free from drafts.

Be sure to provide enough space so hens are not crowded.

Leghorns need about 2½ square feet per bird. Example: A flock of 30 layers needs 75 square feet, or a space 7½ feet wide and 10 feet long.

Place ½-inch hardware cloth over all windows and other openings.

If a wood floor is used, place it at least 1 foot above the ground. This will help keep wood from rotting and reduce termite damage. A concrete floor is easier to keep clean than a wood floor.

EQUIPMENT

Most equipment needed for a small flock of chickens can be made at home or bought at low cost.

A good way to arrange the equipment in a poultry house is shown on page 4.

Lighting

If electricity is available, you may want to install light in the poultry house yourself. Or you may get a neighbor to do it.

Caution: Be sure the wiring is properly installed and meets all safety requirements.

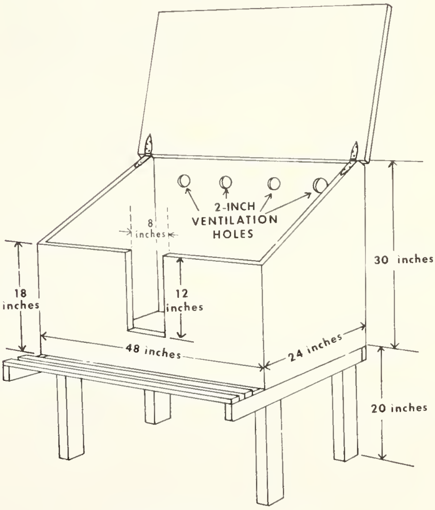
One fixture with a 40-watt light bulb provides enough light for 200 square feet of floor space.

Attach the fixture to the ceiling directly above the feeding area. Use high-gloss white paint on the ceiling around the fixture to reflect the light (as shown above). Or use a 12-inch reflector.

Nests

You'll have cleaner eggs—and fewer broken ones—if you provide nests for your flock.

A community nest is easy to build and costs less than individual nests. A community nest 48 inches wide by 24 inches deep is large enough for 30 to 40 layers. Slope the hinged lid (as shown below) to



Community nest

prevent birds from perching on the top of the nest. Cut several small holes for ventilation at the back.

If you prefer individual nests, provide one nest for every four hens. Build individual nests 14 inches wide, 14 inches high, and 12 inches deep. Place nests in two rows, high enough so layers can "work" underneath them.

Roosts

If roosts are used, they should be put at the back of the poultry house. away from drafts. They should be about 2½ feet above the floor and 10 to 12 inches apart.

Use 2- by 2-inch pieces, with slightly rounded upper corners. Allow 8 inches of roost space for each layer.

Feeders and Waterers

To make a feeder, build a wooden box (as shown below). Use a 1-inch lath to make a lip on each side. This will keep hens from "beaking" feed out and wasting it. Across the top of the feeder, attach a board that will rotate when hens try to stand on it. The board can be pivoted by means of a nail on each end.

Put the feeder where layers can eat from both sides. Set it on a box or slatted platform about 10 inches high. A 6-foot feeder is big enough to hold feed for 30 layers.

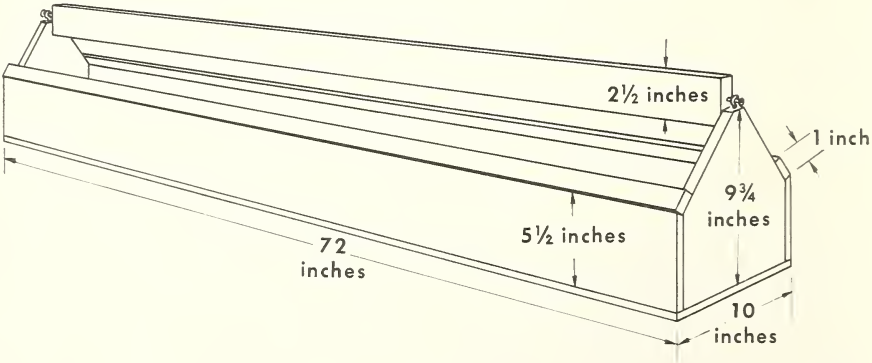
Each layer needs 1 to 1½ inches of watering space. A plastic bucket with a wooden platform built around it makes a good waterer. (See p. 7.) A bucket 12 or 15 inches across the top will hold enough water for 30 hens. If you use 8- or 10-inch buckets, provide two waterers for 30 birds.

Droppings Board or Pit

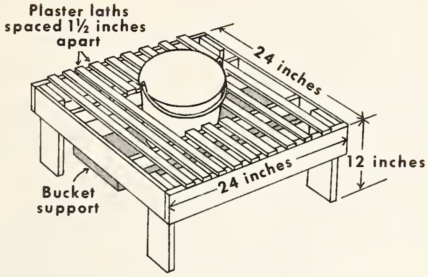
A platform to hold droppings—called a droppings board—helps keep litter clean.

If you use a droppings board, make it from smooth lumber that is free of cracks. Place it 8 inches below roosts. With one roost, the droppings board should be a total of 20 inches wide. With two roosts, the board should be 34 inches wide. Poultry netting under roost poles keeps birds out of droppings.

A droppings "pit"—or an enclosed area under the roosts—may be used instead of a board. Do not put a droppings pit in a house with



Feeder



Waterer

wood floors, because extra moisture and weight will make floors sag.

If you build a droppings pit, cover it with welded wire mesh so hens won't get into droppings.

TAKING CARE OF LAYERS

Before you put hens in a laying house, thoroughly clean and disinfect the inside.

Put fresh litter on the floor. Litter may be clean wood shavings, sawdust, ground corncobs, tobacco stems, chopped straw, or other material that takes up moisture.

Layers need "deep litter." Start with a 3- or 4-inch layer of litter. Add fresh litter once or twice a month until it builds up to 6 or 8 inches. Stir litter occasionally. Remove and replace any wet spots (caked litter).

Use the built-up litter as long as you keep the original layers. Remove it just before housing a new flock.

Put fresh material in nests. Nesting material may be fine wood shavings, sawdust, or straw.

Clean feeders two or three times a week. Clean waterers daily. If you have a droppings board, clean it every week. If you have a droppings pit, clean it often enough to keep down odors and flies.

Confinement

If possible, keep layers inside the laying house at all times. Properly housed hens usually are healthier and have fewer parasites than hens in a yard or on range. You lose fewer layers and fewer eggs with a flock that is confined.

Even if hens are allowed to run—which is not recommended—it is a good idea to confine them to the house until noon. Close the poultry house when birds have returned for the night.

Light

Hens must get 14 hours of light every 24 hours to lay at a high, steady rate. In winter, hens do not get 14 hours of natural light, so egg production goes down.

If you want to keep your hens laying regularly in winter, use electric light a few hours each day from October to March. Layers should get enough electric light to make a total of **14 hours** when added to natural light. Turn on light before sunrise or after sunset.

A timeclock or a hand-wound alarm clock may be set up to turn on lights automatically.

Does a small flock of layers really need light?

Yes. Light in the poultry house will give you more eggs during winter months when eggs cost most.

The cost of lighting a small poultry house in Appalachia during the winter averages less than 30 cents a month.

Eggs

Gather eggs before noon and again in the evening. Frequent gathering is the best way to get eggs of good quality. If eggs are allowed to stay in the nests or on the floor all day, some will be accidentally broken and hens will eat them. From this, hens may develop the bad habit of breaking eggs for food.

Cracked or soiled eggs may contain bacteria that can produce food poisoning. For your protection, use cracked or soiled eggs only when they are thoroughly cooked or when the foods in which they are used are thoroughly cooked.

Clean dirty eggs. Wash only those that are very dirty. Place eggs in a refrigerator or cellar as soon as you gather them. Do not let eggs freeze.

Culling

Check hens regularly after they begin to lay. Cull poor layers from the flock; eat them if they are healthy and in good condition.

You can tell which birds are laying by examining hens carefully.

In a good layer, the abdomen is soft and deep. The vent is large and moist. Comb and wattles are bright red.

For more information, see Farmers' Bulletin 2216, "Culling Hens."

DISEASES AND PARASITES

Watch birds for signs of disease. Your county agent or veterinarian may help you if you suspect a disease outbreak.

Kill very sick birds. Burn or bury deeply all birds that die.

To reduce losses, put sick birds in a coop, away from other birds.

Keep the house clean to help reduce disease and parasites.

Get rid of rats and mice in the poultry house. They spread disease and eat chicken feed.

Examine your flock regularly for mites and lice. Treat infested birds as described in Leaflet 383, "Poultry Mites: How To Control Them," or Leaflet 474, "Chicken Lice: How To Control Them."

This leaflet describes one way to keep a small flock of layers that will furnish eggs for your own use.

It does not tell how to raise fryers, broilers, or other poultry for meat. It does not tell how to raise started pullets for egg production. It is not suited to raising large or commercial flocks. If you want to know about these methods, ask your county agricultural agent.

The information in this leaflet has been prepared especially for families in Appalachia, a region that includes all of West Virginia and parts of Alabama, Georgia, Kentucky, Maryland, New York, North Carolina, Ohio, Pennsylvania, South Carolina, Tennessee, and Virginia.

To obtain a free copy of publications mentioned, send a post card with your name, address, zip code, and bulletin title and number to U.S. Department of Agriculture, Washington, D.C., 20250.

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